

## NOTES ON *LECHEA MARITIMA* VAR. *VIRGINICA* (CISTACEAE)

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### ABSTRACT

We assess variation within *Lechea maritima* and provide a key to infraspecific taxa. Specimen citations document the range of *L. maritima* var. *virginica*.

### RESUMEN

Se valora la variación en *Lechea maritima* y se aporta una clave de taxa infraspecificos. Las citas de especímenes documentan el área *L. maritima* var. *virginica*.

*Lechea maritima* Legg. var. *virginica* Hodgdon is restricted to maritime sands, historically known from coastal Virginia including the southern Delmarva Peninsula (Hodgdon 1938). In recent years, botanists have discovered var. *virginica* in adjacent states (see specimens cited below). To better understand and evaluate the status of var. *virginica*, we examined over 80 specimens from throughout the range of *L. maritima* housed at NCSC, NCU, VPI, and WILLI. Specimens at NCU and VPI were annotated in 1984 by D. Lemke to *Lechea maritima* without varietal designation. In their analysis of the genus in the southeastern United States, Wilbur & Daoud (1961) omitted *L. maritima*, because at that time it was not known from their area of coverage. For an excellent description of the nominate variety, see Barringer (2004).

### IDENTIFICATION AND KEY

We found that plants of var. *virginica* are generally more robust than those of var. *maritima*, with notably thicker stems. Hodgdon (1938) suggested that the main above-ground stems of var. *virginica* may be perennial, but this has not been verified. Measurements of stem thickness indicate that those of var. *virginica* (2.0–4.0 mm) are significantly wider than those of the nominate variety (1.0–2.5 mm), which suggests that southern plants may well be perennial. Whereas stems of var. *maritima* usually are strongly ascending and tend to have inflorescence branches along both sides, stems of var. *virginica* usually are weakly ascending to procumbent and tend to have inflorescence branches along one side.

Seed number and shape are the most consistently reliable characters that we tested; the great majority of specimens had seeds of only one type. We rarely found capsules of var. *virginica* to contain more than two seeds, whereas capsules of var. *maritima* contain three or four seeds, never two. One specimen at NCU (Windler 3279, Assateague Island, Worcester County, Maryland) had three seeds in most capsules, each seed more-or-less three-sided but mildly concave ventrally. This same specimen also had a few capsules with two seeds, also three-sided but strongly concave ventrally. Otherwise, this specimen resembled var. *virginica* in its robust size, stem 2.7 mm in diameter, and dull brown sepals. A second specimen at NCU (Ahles 57756, north of Fenwick Beach, Sussex County, Delaware) has some capsules with three seeds and some with two; otherwise the plants match var. *virginica*. Thus, near the range limits of the two varieties of *L. maritima*, one may expect to encounter specimens that show evidence of hybridization. Hodgdon included measurements of seed length in his key; we did not evaluate this character. Sepal color exhibits tendencies (tinged maroon northward, dull brown southward), but is difficult to apply consistently due to variation.

Hodgdon's key works reasonably well in separating var. *virginica* from var. *maritima*, but there is significant overlap in his vegetative characters, so we have de-emphasized them. We include a modified key here in which seed number, seed shape, and stem width are stressed.



- 1 Seeds 3–4(–5), weakly 3-sided and more-or-less resembling sections of an orange, or 2-sided and convex ventrally; main stems 1.0–2.5 mm diameter, strongly ascending-erect to subprocumbent; sepals strongly tinged maroon, occasionally dull brown; southern Maine to Delaware \_\_\_\_\_ var. **maritima**
- 1 Seeds 2(–3), 2-sided and flattish, concave ventrally; main stems 2.0–4.0 mm diameter, procumbent to ascending; sepals dull brown, occasionally tinged maroon; southeastern Delaware to northeastern North Carolina \_\_\_\_\_ var. **virginica**

#### DISTRIBUTION AND RARITY

Hodgdon (1938) stated that var. *maritima* ranges from southern Maine to Delaware, but did not cite specimens of the nominate variety, so we do not know where in Delaware var. *maritima* was taken. At the time of his monograph, var. *virginica* was known only from Norfolk (now City of Chesapeake), Northampton, and Princess Ann (now City of Virginia Beach) counties in Virginia. Currently this variety is known from eight counties in Virginia, one in Maryland, one in Delaware, and one in North Carolina. Although apparently rare in the latter three states, var. *virginica* is of frequent occurrence in Virginia. It occurs within several national and state protected areas with much suitable habitat and is not under any acute range-wide threat, although seashore development poses a severe threat outside of refuges. Therefore, we rank it G5T3, using criteria developed by NatureServe. Representative specimens are cited below.

**DELAWARE. Sussex Co.:** sand dunes, 3.6 mi N of Delaware-Maryland line on Del. 14, N of Fenwick Beach, *Ahles 57756* with Baird (NCU). **MARYLAND. Worcester Co.:** Assateague Island, stabilized dunes with *Hudsonia*, two mi south of paved road, *Hill 15741* (NCU); sand dunes just N of Ocean City on Md. 528, *Ahles 57730* with Baird (NCU). **NORTH CAROLINA. Dare Co.:** Nags Head, on US 158 bypass, about 2 mi N of US 64, in rear dune zone, *Kindell 477* (NCSC); Jockeys Ridge State Park, sound side, maritime dry grassland, Kirkman (report to NC Natural Heritage Program). **VIRGINIA. Accomack Co.:** Assateague Island, Harvill 15113 (NCU); Chincoteague National Wildlife Refuge, Assateague Island, *Fleming 12644* (WILLI). **City of Chesapeake Co.:** near Ocean View, *Kearney, Jr. 1001* (US, cited in Hodgdon 1938). **City of Virginia Beach Co.:** sandy lot, Atlantic Blvd, *Ware 7371 with Kral* (VPI); N of Virginia Beach, *Fleming 10040* (WILLI); Back Bay National Wildlife Refuge, *Chamberlain 25-11* (VPI). **Lancaster Co.:** cited in Terwilliger et al. 1991. **Matthews Co.:** Diggs Beach, *Montfrans 165* (WILLI). **Middlesex Co.:** N 685 (WILLI). **Northampton Co.:** near Kiptopeake Beach, *Harvill 15363* (NCU). **Northumberland Co.:** cited in Terwilliger et al. 1991.

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